

EYE for DESIGN

W. Philly's Hazel House mixes tradition with sustainable innovation

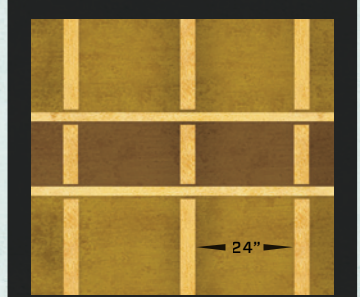
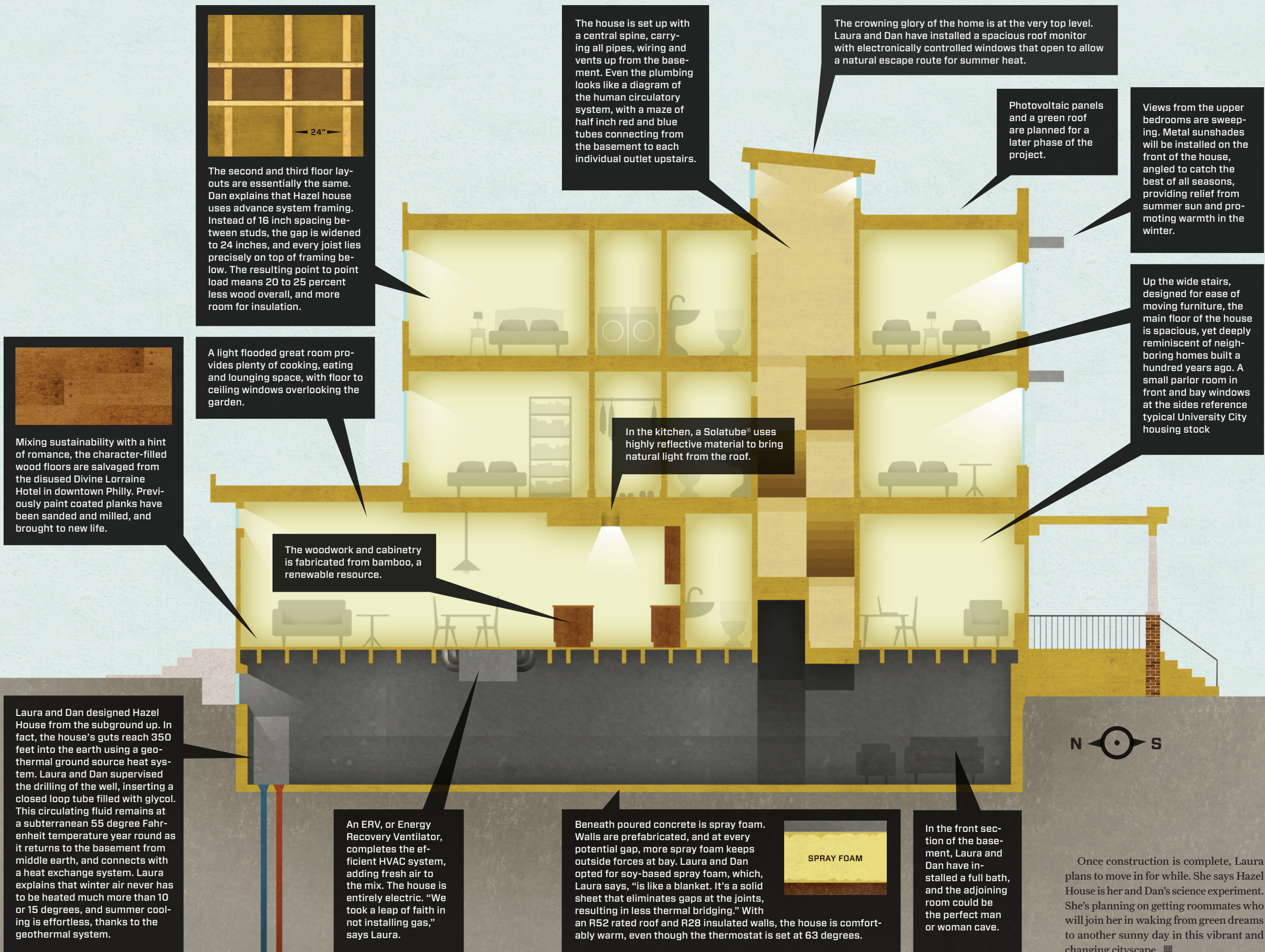
by SUE SPOLAN

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SOME NEIGHBORHOODS exert a magnetic pull. You return over and over. At the far reaches of University City, Hazel House sits proudly in one such district, at the corner of 51st and Hazel. Brand new construction arising from a previously empty lot, Hazel House's modern goals of sustainability and efficiency join forces with traditional West Philly rowhome styling.

If the house is a body, and the body is a temple, Hazel House stands as a spiritual center of conscious construction. Hazel House is slated for completion later this spring. After a four year process of green design and construction, the 3 story brick home will receive LEED Platinum certification. Every effort was made to balance sustainability with practicality. "This is not an elite green project," explains co-architect Laura Raymond. Working alongside business partner and architect Dan Garofalo, the team has made every effort to use locally sourced and green products, yet the occasional trip to a big box store provides much needed value on the construction dollar.

On the path from dream to reality, Laura and Dan selected Calfayan Construction, headed up by Reis and Laura Calfayan. Originally, Dan and Laura sought a completely conventional contractor who might be trained in green building. Through word of mouth recommendations, Reis Calfayan came on board. He is a smart contractor who is able to negotiate green dreams to fit the bottom line. "Sustainability is a balancing act between what's morally right and what's achievable," says Reis. "Some items on the wish list don't make sense financially."



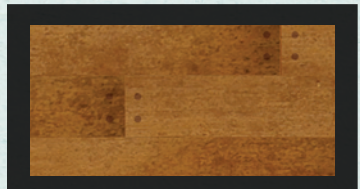
The second and third floor layouts are essentially the same. Dan explains that Hazel house uses advance system framing. Instead of 16 inch spacing between studs, the gap is widened to 24 inches, and every joist lies precisely on top of framing below. The resulting point to point load means 20 to 25 percent less wood overall, and more room for insulation.

The house is set up with a central spine, carrying all pipes, wiring and vents up from the basement. Even the plumbing looks like a diagram of the human circulatory system, with a maze of half inch red and blue tubes connecting from the basement to each individual outlet upstairs.

The crowning glory of the home is at the very top level. Laura and Dan have installed a spacious roof monitor with electronically controlled windows that open to allow a natural escape route for summer heat.

Photovoltaic panels and a green roof are planned for a later phase of the project.

Views from the upper bedrooms are sweeping. Metal sunshades will be installed on the front of the house, angled to catch the best of all seasons, providing relief from summer sun and promoting warmth in the winter.



Mixing sustainability with a hint of romance, the character-filled wood floors are salvaged from the disused Divine Lorraine Hotel in downtown Philly. Previously paint coated planks have been sanded and milled, and brought to new life.

A light flooded great room provides plenty of cooking, eating and lounging space, with floor to ceiling windows overlooking the garden.

In the kitchen, a Solatube® uses highly reflective material to bring natural light from the roof.

Up the wide stairs, designed for ease of moving furniture, the main floor of the house is spacious, yet deeply reminiscent of neighboring homes built a hundred years ago. A small parlor room in front and bay windows at the sides reference typical University City housing stock

The woodwork and cabinetry is fabricated from bamboo, a renewable resource.

Laura and Dan designed Hazel House from the subground up. In fact, the house's guts reach 350 feet into the earth using a geothermal ground source heat system. Laura and Dan supervised the drilling of the well, inserting a closed loop tube filled with glycol. This circulating fluid remains at a subterranean 55 degree Fahrenheit temperature year round as it returns to the basement from middle earth, and connects with a heat exchange system. Laura explains that winter air never has to be heated much more than 10 or 15 degrees, and summer cooling is effortless, thanks to the geothermal system.

An ERV, or Energy Recovery Ventilator, completes the efficient HVAC system, adding fresh air to the mix. The house is entirely electric. "We took a leap of faith in not installing gas," says Laura.

Beneath poured concrete is spray foam. Walls are prefabricated, and at every potential gap, more spray foam keeps outside forces at bay. Laura and Dan opted for soy-based spray foam, which, Laura says, "is like a blanket. It's a solid sheet that eliminates gaps at the joints, resulting in less thermal bridging." With an R52 rated roof and R28 insulated walls, the house is comfortably warm, even though the thermostat is set at 63 degrees.



In the front section of the basement, Laura and Dan have installed a full bath, and the adjoining room could be the perfect man or woman cave.



Once construction is complete, Laura plans to move in for while. She says Hazel House is her and Dan's science experiment. She's planning on getting roommates who will join her in waking from green dreams to another sunny day in this vibrant and changing cityscape. @